1996-97 AUTOMATIC TRANSMISSION SERVICING Automatic Transmission

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Automatic Transmission

MODEL IDENTIFICATION

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Series (1)	Model
"C"	2WD Pickup, Sierra, Suburban, Tahoe & Yukon
"G"	(2) RWD Van
"K"	4WD Pickup, Sierra, Suburban, Tahoe & Yukon
"L"	AWD Astro & Safari
"M"	2WD Astro & Safari
"P"	Commercial Van/Motorhome
"S"	2WD Blazer, Jimmy, Pickup & Sonoma
"T"	4WD Blazer, Jimmy, Pickup & Sonoma, AWD Bravada
"U"	Lumina Van, Silhouette, Trans Sport & Venture

⁽¹⁾ Vehicle series is fifth character of VIN.

LUBRICATION

SERVICE INTERVALS

Transmission/Transaxle ("C" & "K" Series)

Check transmission/transaxle fluid level at each engine oil change. Under severe driving conditions or for vehicles over 8600 GVWR, change transmission fluid and filter every 50,000 miles. For other vehicles under normal driving conditions, fluid and filter do not require periodic changing.

Transmission/Transaxle ("T" Series Bravada Only)

Check transmission/transaxle fluid level at each engine oil change. Under normal driving conditions, fluid and filter do not require periodic changing. Under severe driving conditions, change transmission fluid and filter every 50,000 miles.

Transmission/Transaxle ("U" Series)

Check transmission/transaxle fluid level at each engine oil change. Under normal driving conditions, change transmission fluid and filter every 100,000 miles. Under severe driving conditions, change fluid and filter every 15,000 miles.

Transmission/Transaxle (All Other Models)

⁽²⁾ Includes Express and Savana.

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Check transmission/transaxle fluid level at each engine oil change. Under normal driving conditions, for vehicles over 8600 GVWR, change transmission fluid and filter every 24,000 miles. For vehicles under 8600 GVWR, change fluid and filter every 30,000 miles. Under severe driving conditions, for vehicles over 8600 GVWR, change transmission fluid and filter every 12,000 miles. For vehicles under 8600 GVWR, change fluid and filter every 15,000 miles.

Transfer Case

Check transfer case lubricant at every oil change or every 12 months. Under severe conditions check more frequently.

CHECKING FLUID LEVEL

NOTE:

Transmission/transaxle must be at normal operating temperature (180-200°F) when checking fluid level. One pint of fluid will raise level from ADD 1 PT. or .5L to FULL mark on dipstick with transmission/transaxle at normal temperature. DO NOT overfill.

Transmission/Transaxle

With vehicle parked on a level surface and engine at idle, move selector lever through all positions, ending in Park. Remove dipstick, wipe clean and check fluid level. Fluid level should be between ADD 1 PT. and FULL marks on dipstick. If vehicle has been driven for extended period of time at high speed, in city traffic or pulling a trailer, an accurate fluid level cannot be immediately determined. Allow transmission/transaxle to cool for about 30 minutes after vehicle is parked, then check fluid level.

Transfer Case

Remove fill plug. Check oil level. If level is not up to fill plug opening, add lubricant as necessary.

RECOMMENDED FLUID

Transmissions/transaxles and transfer cases use Dexron-III ATF.

FLUID CAPACITY

Transmission/Transaxle

The transmission/transaxle refill capacities given below are approximate. Correct fluid level should always be determined by marks on dipstick, rather than by amount of fluid added. DO NOT overfill transmission/transaxle. See appropriate REFILL CAPACITIES table.

TRANSMISSION/TRANSAXLE REFILL CAPACITIES

		Dry Fill
	Refill (Service) Qts.	(Overhaul) Qts.
Application	(L)	(L)
3T40	4.0 (3.8)	7.0 (6.6)

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4L60-E	5.0 (4.8)	11.0 (10.6)
4T60-E	6.0 (5.7)	8.0 (7.6)
4L80-E		
"C", "G" & K" Series	7.7 (7.3)	13.5 (12.8)
"P" Series	5.0 (4.7)	11.5 (10.9)

TRANSFER CASE REFILL CAPACITIES

Application	Capacity
Models 231 & 233	2.5 Pts. (1.8L)
Model 241	5.2 Pts. (2.5L)
Model 243	2.5 Pts. (1.8L)
Model 4401	2.9 Pts. (1.4L)
Model 4470	6.6 Pts. (3.1L)
Model 4472	3.0 Pts. (1.5L)

DRAINING & REFILLING

Transmission/Transaxle

- 1. Loosen transmission/transaxle oil pan bolts. Pry pan loose and allow fluid to drain. Remove oil pan, gasket, and filter or filter screen. Replace paper element filter (if equipped).
- 2. Clean filter screen (if equipped) and pan with solvent, and blow dry with compressed air. Install oil pan with NEW gasket. Add fluid to proper mark on dipstick.

NOTE:

On 4WD vehicles it may be necessary to remove the crossmember at the rear of the transmission to allow adequate clearance for transmission oil pan removal. Forcing the pan past the crossmember may damage the internal transmission wiring harness or solenoid connections.

Transfer Case

Remove drain plug from transfer case. Remove fill plug for easier draining. With fluid drained, reinstall drain plug. Fill transfer case to bottom of filler plug opening with appropriate fluid.

ADJUSTMENTS

THROTTLE VALVE (TV) CABLE

NOTE: The Hydra-Matic 4L60-E, 4T60-E and 4L80-E are electronically controlled transmissions/transaxles, and do not require adjustment.

3T40

Depress metal lock tab on adjuster and hold. Move slider back through fitting away from throttle body lever

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until slider stops at fitting. See $\underline{Fig. 1}$. Release lock tab and open throttle body lever to full throttle stop. This automatically adjusts slider to correct setting.

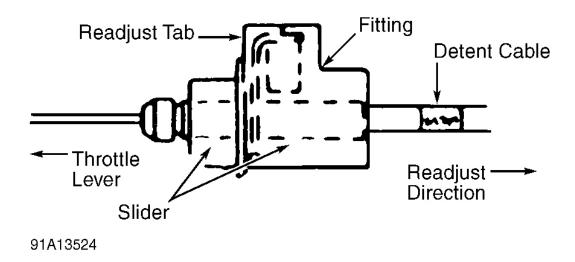


Fig. 1: Adjusting Throttle Valve (TV) Cable Courtesy of GENERAL MOTORS CORP.

SHIFT LINKAGE

NOTE: Shift linkage adjustment information for "G", "S" and "T" series is not available from manufacturer.

"C", "K", "L" & "M" Series

- 1. Ensure shift cable is not restricted. Set transmission range selector lever to Neutral position. Raise and support vehicle. At transmission, set transmission shift lever to Neutral position. Turn shift lever clockwise to stop, then counterclockwise 2 detents. This is Neutral position.
- 2. Disconnect shift cable end from shift lever. Pull cable end completely forward and release it. Adjustment spring will position cable to its most rearward position. Reconnect shift cable end to shift lever.

"P" Series

- 1. Remove clevis pin retaining clip and clevis pin. Move shift lever arm at transmission fully forward and then pull back 2 detents to Neutral position.
- 2. Loosen jam nut and adjust cable end to align with shift lever arm at transmission. Tighten jam nut. Reinstall clevis pin and clip. Ensure engine starts in Park and Neutral only.

"U" Series

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Place shift lever in Neutral. Neutral can be found by rotating transaxle select lever clockwise from Park to Reverse to Neutral. Push tab on cable adjuster to adjust cable in cable mounting bracket.

PARK/LOCK CONTROL CABLE

NOTE: Park/lock control cable adjustment information for all other models is not available from manufacturer.

"U" Series

- 1. Lift cable lock button. Move shift lever to Park. Snap cable connector into shifter base. Ensure ignition key is in RUN position.
- 2. Snap cable housing into ignition switch inhibitor. Turn key to LOCK position. Snap cable end onto park lock lever pin. Remove slack from cable connector. Snap cable connector lock button down.

PARK NEUTRAL POSITION (PNP) SWITCH

"C", "G", "K", "L", "M", "P", "S" & "T" Series (Transmission Mounted Switch)

- 1. Disconnect negative battery cable. Place transmission gear selector in Neutral position. Neutral position can be found by rotating gear lever clockwise from Park (full counterclockwise position) to Reverse, and then to Neutral.
- 2. Raise and support vehicle. Move shift lever arm at transmission fully forward and then pull back 2 detents to Neutral position. Loosen shift lever nut from shift shaft. Disconnect PNP switch wiring harness connector. Remove shift cable from shift lever arm. Remove shift lever nut and shift lever.
- 3. Remove 2 PNP switch bolts and PNP switch. Position PNP switch Adjusting Tool (J41364-A) on PNP switch. Ensure 2 lower tabs on tool align with 2 slots on PNP switch. Rotate tool until upper locator pin on tool aligns with slot on top of switch. Leave tool on PNP switch. Ensure no burrs exist on shift lever shaft.
- 4. Align PNP switch hub flats with manual shaft flats. Slide PNP switch on shift lever shaft until PNP switch mounting bracket contacts mounting bosses on transmission. Install 2 PNP switch bolts and tighten to 21 ft. lbs. (28 N.m). Remove tool. Reconnect PNP switch wiring harness connector.

CAUTION: Hold shift lever while tightening nut to prevent internal transmission damage.

5. Install shift lever and nut. Tighten nut to 21 ft. lbs. (28 N.m). Install shift cable. Lower vehicle. Reconnect negative battery cable. Ensure vehicle does not start in any gear selector position except Park and Neutral. If further adjustment is necessary, loosen PNP switch bolts. Rotate switch slightly, tighten bolts and recheck for proper operation.

"U" Series (Transmission Mounted Switch)

1. Raise and support vehicle. Loosen switch mounting bolts. Align hole in switch lever with hole in switch assembly. Insert a gauge pin through switch holes to hold switch in Neutral position.

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2. With selector lever on transmission in Neutral position, tighten switch mounting bolts and remove gauge pin. Lower vehicle. Ensure vehicle does not start in any gear selector position except "P" and "N".

TORQUE SPECIFICATIONS

TORQUE SPECIFICATIONS

Application	Ft. Lbs. (N.m)	
Oil Pan Bolts		
3T40	8 (11)	
4L60-E & 4L80-E	15 (20)	
4T60-E	13 (18)	
Park Neutral Position Switch ("U" Series)		
3T40	22 (30)	
4T60-E	15 (20)	
Shift Linkage Spring Washer Screw		
"C" & "K" Series	18 (24)	
"L" & "M" Series	26 (35)	